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## AVERAGE AND PROBABILITY.

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200. Proposed by PROFESSOR R. D. CARMICHAEL, Anniston, Ala.

A line  $AB=l$  is extended to  $P$  making  $BP=p$ . If a point  $D$  is taken at random in  $BP$ , what is the mean value of  $AD \cdot DP$ ?

201. Proposed by J. EDWARD SANDERS, Reinersville, Ohio.

A random straight line is drawn across a circle and another through a given point on the circumference. Find the chance that they intersect within the circle.

202. Proposed by F. P. MATZ, Ph. D., Reading, Pa.

If three chords are drawn at random in a circle, what is the chance the center of the circle is enclosed by the three chords, and what is the mean area of this enclosing triangle?

203. Proposed by J. EDWARD SANDERS, Reinersville, Ohio.

Find the average length of a hole at random through a given cone.

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## MISCELLANEOUS.

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180. Proposed by W. J. GREENSTREET, M. A., Stroud, England.

Show that  $\sum_{n=1}^{n=\infty} (-1)^n \frac{1}{(2n-1)(2^{2n}-1)} = \frac{1}{2} \tan^{-1} \frac{3 \cdot 2^n}{2^{2n+1}-1}$ , the smallest value of each inverse function being taken.

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## NOTES AND NEWS.

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Dr. Herbert G. Keppel, of Northwestern University, has been elected head of the department of mathematics of the University of Florida.

The next annual meeting of the American Mathematical Society will be held at Baltimore, Md., during the holidays in connection with the annual conference of the American Society for the Advancement of Science.

At the meeting of the Central Association of Science and Mathematics Teachers, held in Chicago, November 27 and 28, 1908, a committee was appointed to select material for concrete applications in the teaching of geometry. This is a move in the right direction, for without doubt geometry teaching has become too much of an exercise in abstract logic.

A movement is under way whereby the recently organized Federation of Associations of Science and Mathematics Teachers throughout the

country may undertake definite work in the matter of educational improvement in these lines. One important step contemplated is the appointment of a representative committee to prepare a national syllabus on geometry.

In *Science*, for October 23rd, appears an article by Professor G. A. Miller, of the University of Illinois, on the "Method of Appointment of University Professors in Foreign Countries." This topic will also be discussed by Professor Wilczynski, of the University of Illinois, at the meeting of the Chicago Section of the American Mathematical Society to be held in Chicago, January 1 and 2, 1909.

At the recent meeting of the New York section of the Association of Teachers of Mathematics in the Middle States and Maryland the general topic for discussion was:

"Modern Tendencies in the Teaching of Algebra, or An Evening with the Writers of Some of the Modern Text-books in Algebra."

The speakers were:

Fletcher Durell, Ph. D., Mathematical Master in the Lawrenceville School, joint author, with Edward R. Robbins, A. B., of the Durell and Robbins Series; Isaac J. Schwatt, Ph. D., Assistant Professor of Mathematics in the University of Pennsylvania, joint author with Dr. G. E. Fisher, of the Fisher and Schwatt Series; N. J. Lennes, Ph. D., Instructor in Mathematics, Brown University, joint author with Dr. H. E. Slaught, of the Slaught and Lennes Series.

The discussions were led by the following:

Mr. Wm. E. Breckenridge, Stuyvesant High School, New York City; Mr. Merle L. Bishop, Boys' High School, Brooklyn; Mr. Oscar W. Anthony, Dewitt Clinton High School, New York City.

This issue of the MONTHLY was mailed February 1.

Dr. T. W. Wright, author of a good text-book on Mechanics, Professor of Mathematics in Union College, and a subscriber of the MONTHLY from the first, died last September.

Mr. A. H. Bell, of Litchfield, Illinois, a valued contributor and subscriber of the MONTHLY from its beginning, is still doing civil engineering work though he is past 78 years of age.